



# Chapter 10

## Pure Monopoly

# Chapter Objectives

- Characteristics of pure monopoly
- Profit-maximizing output and price
- Economic effects of monopoly
- Charging different prices in different markets

# Characteristics of Monopoly

- Single seller
- No close substitutes
- “Price maker”
- Blocked entry
- Nonprice competition

# Examples of Monopoly

- Regulated or natural monopolies
  - electricity
- Near monopolies
  - Western Union
  - Frisbee
  - De Beers
- Geographic monopolies
  - Professional sport teams
- Dual objectives of study

# Barriers to Entry

- Economies of scale
- Legal barriers to entry
  - Patents
  - Licenses
- Ownership or control of essential resources
- Pricing and other strategic barriers to entry

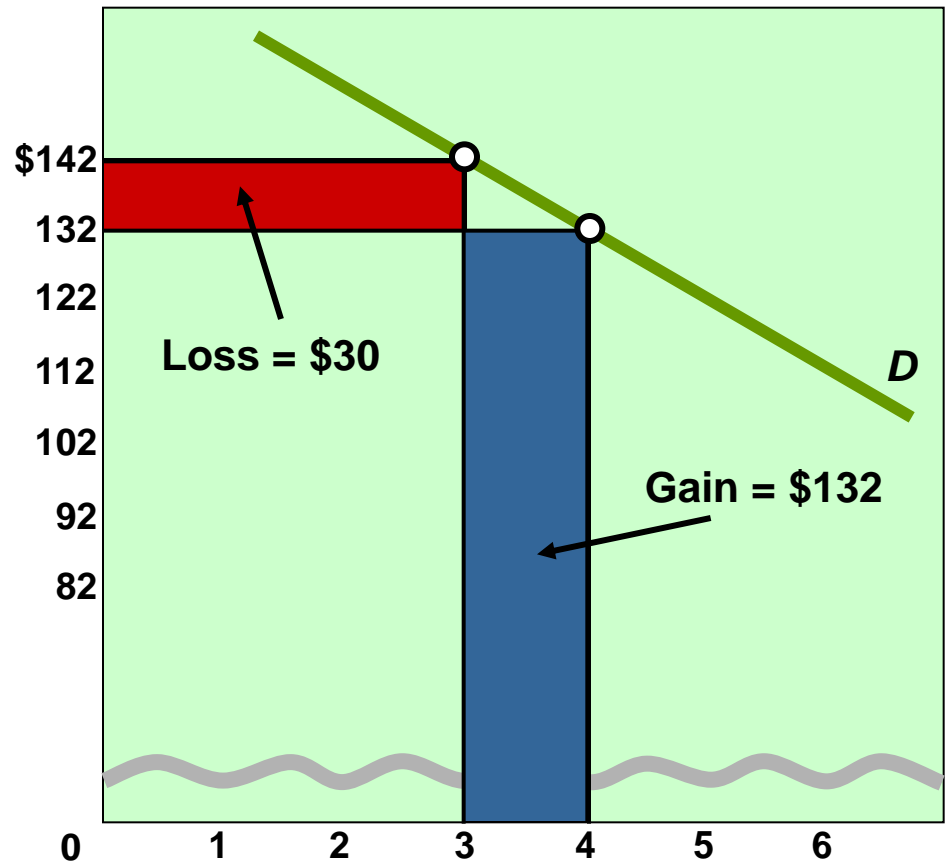
# Monopoly Demand

- Assumptions:
  - Monopoly status is secure
  - No government regulation
  - Single-price monopolist
- Face down-sloping demand
  - Entire market demand

# Price and Marginal Revenue

## Marginal revenue is less than price

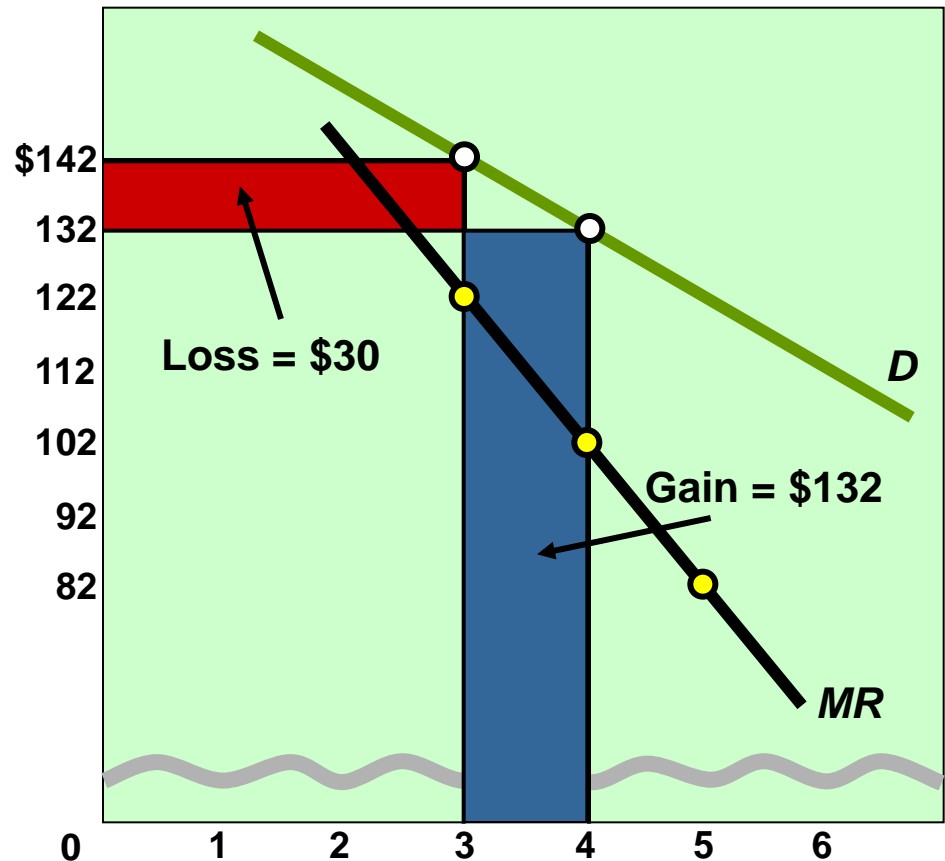
- A monopolist is selling 3 units at \$142
- To sell 4, price must be lowered to \$132
- All customers must pay the same price
- TR increases \$132 minus \$30 ( $3 \times \$10$ )



# Price and Marginal Revenue

## Marginal revenue is less than price

- A monopolist is selling 3 units at \$142
- To sell 4, price must be lowered to \$132
- All customers must pay the same price
- TR increases \$132 minus \$30 ( $3 \times \$10$ )
- \$102 becomes a point on the MR curve
- Try other prices to determine other MR points



**The Constructed Marginal Revenue Curve  
Must Always Be Less Than the Price**



# Down-Sloping Demand

- Marginal revenue  $<$  price
  - To increase sales, must lower price
- Firm is a price maker
  - Choose P,Q combination
- Operate in the elastic region
  - Marginal revenue  $> 0$
  - Total-revenue test (recall)

# Profit Maximization

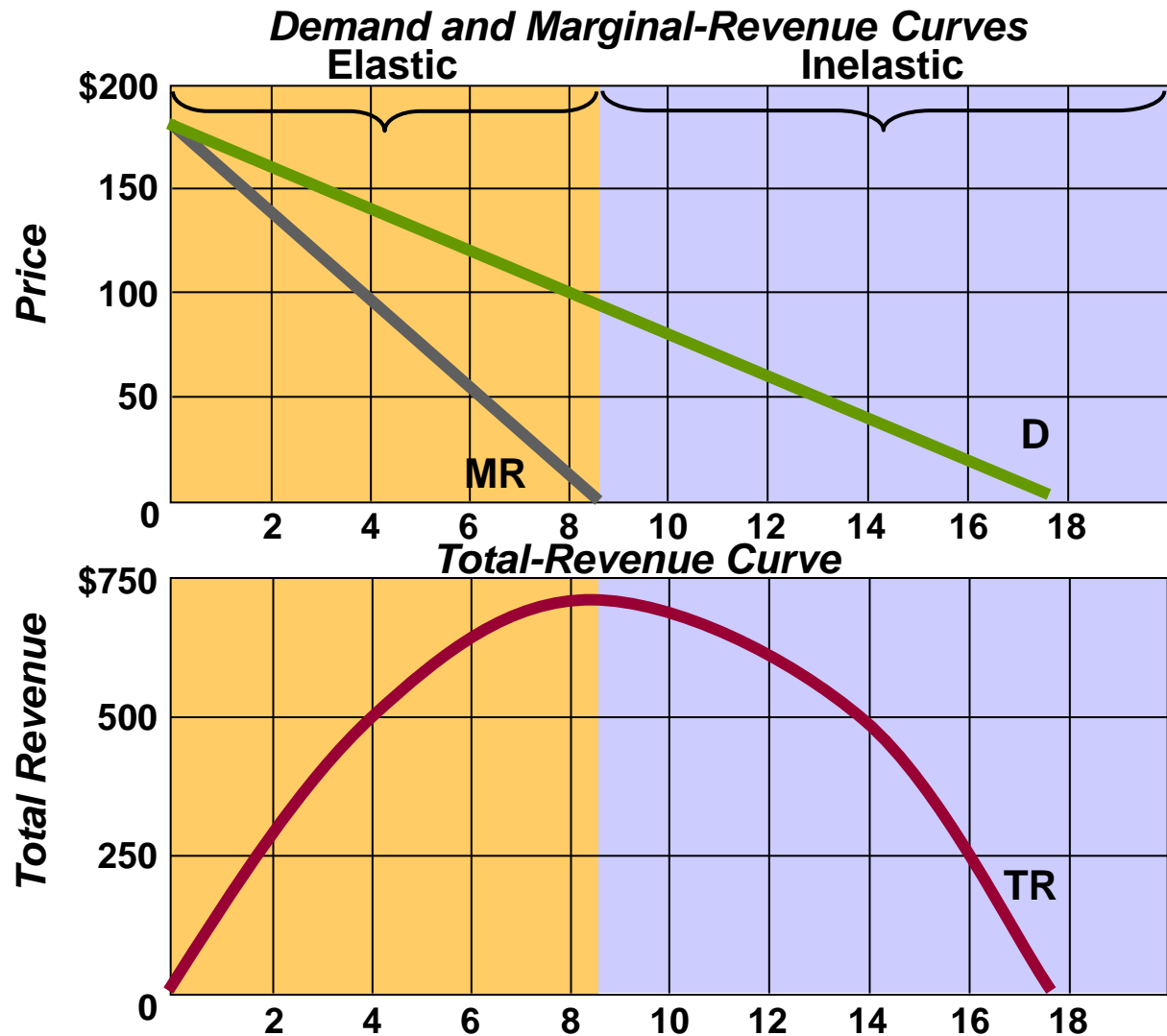
- Output-price determination
  - Marginal revenue marginal cost rule
  - Same cost definitions
- No supply curve

# Monopoly Revenue and Costs

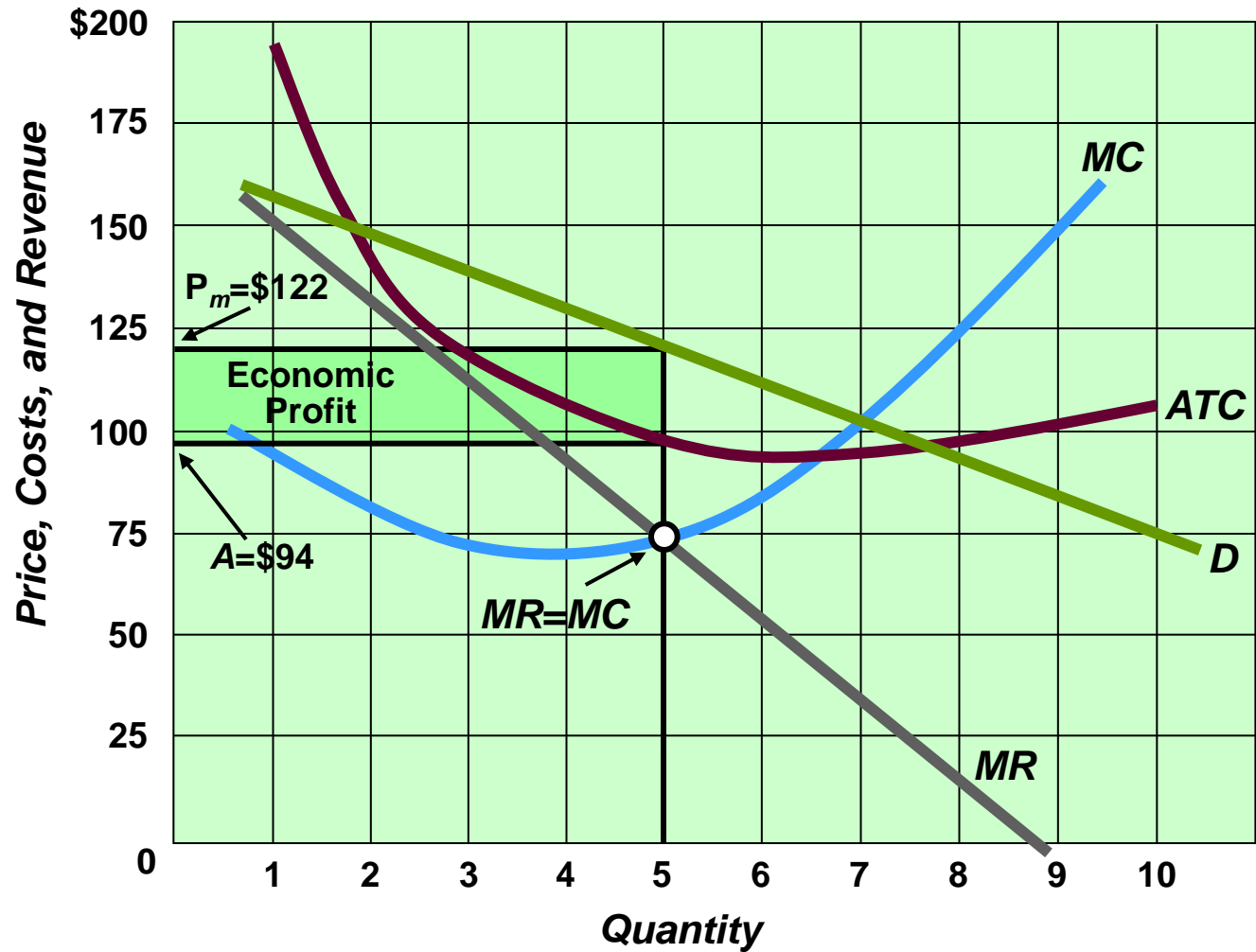
Revenue Data				Cost Data			
(1) Quantity Of Output	(2) Price (Average Revenue)	(3) Total Revenue (1) X (2)	(4) Marginal Revenue	(5) Average Total Cost	(6) Total Cost (1) X (5)	(7) Marginal Cost	(8) Profit (+) or Loss (-)
0	\$172	\$0			\$100		\$-100
1	162	162	\$162	\$190.00	190	\$90	-28
2	152	304	142	135.00	270	80	+34
3	142	426	122	113.33	340	70	+86
4	132	528	102	100.00	400	60	+128
5	122	610	82	94.00	470	70	+140
6	112	672	62	91.67	550	80	+122
7	102	714	42	91.43	640	90	+74
8	92	736	22	93.75	750	110	-14
9	82	738	2	97.78	880	130	-142
10	72	720	-18	103.00	1030	150	-310

**Can you See Profit Maximization?**

# Monopoly Revenue and Costs



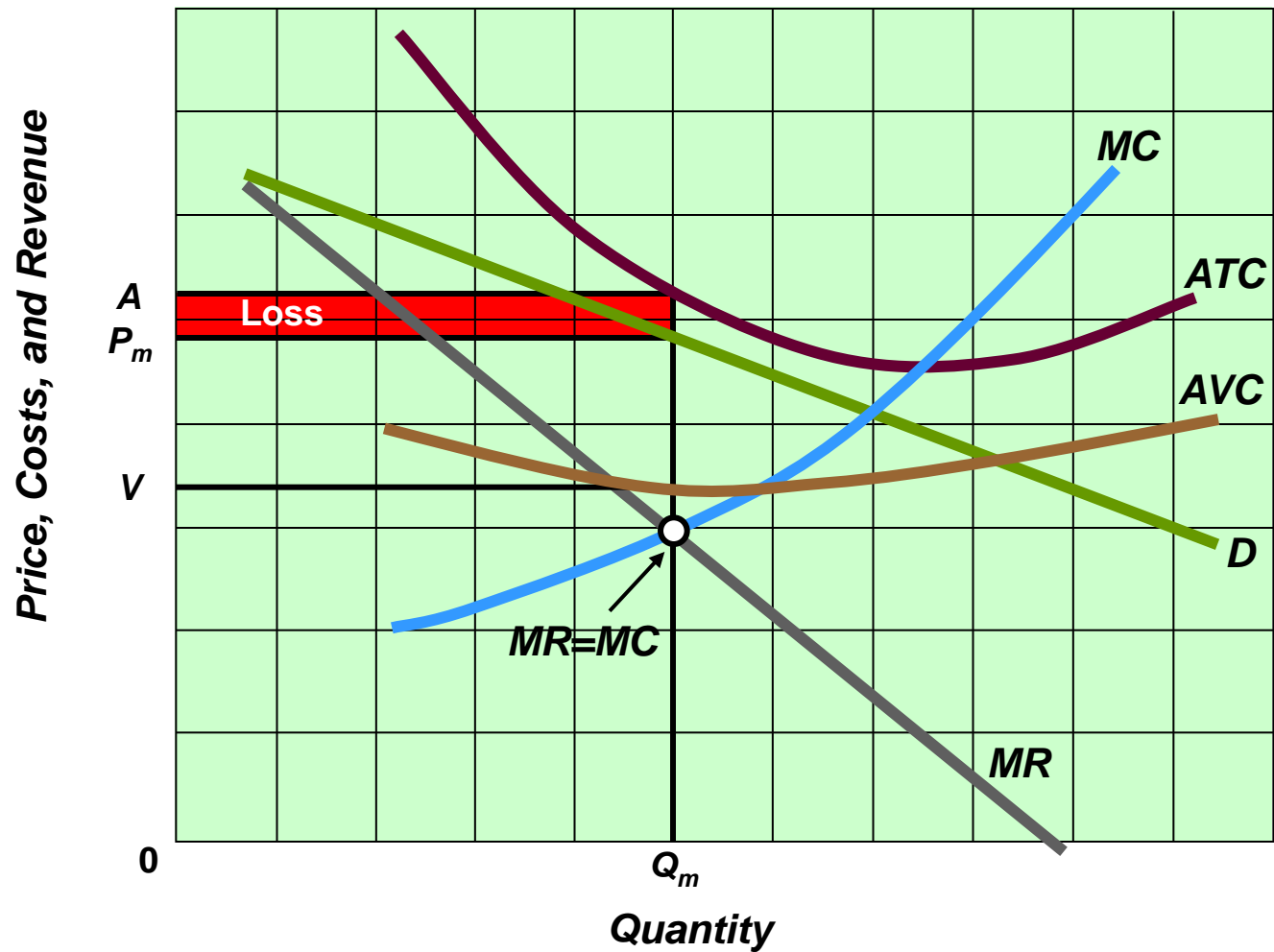
# Profit Maximization



# Misconceptions

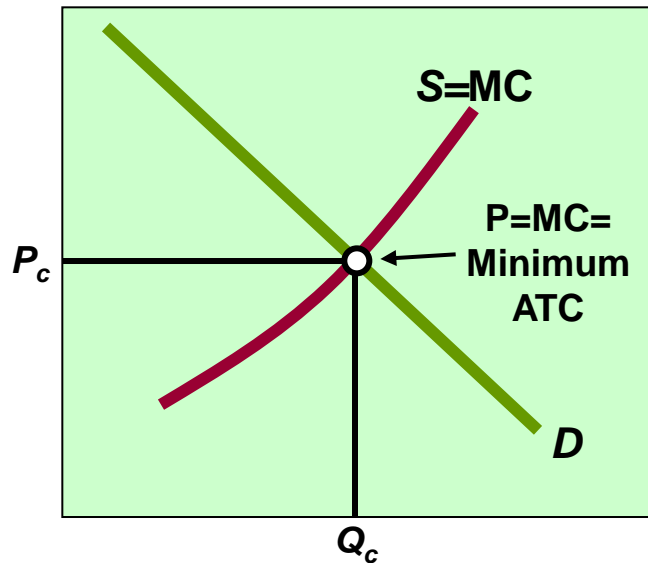
- Not the highest price
- Total, not unit, profit
- Possibility of losses

# Loss Minimization

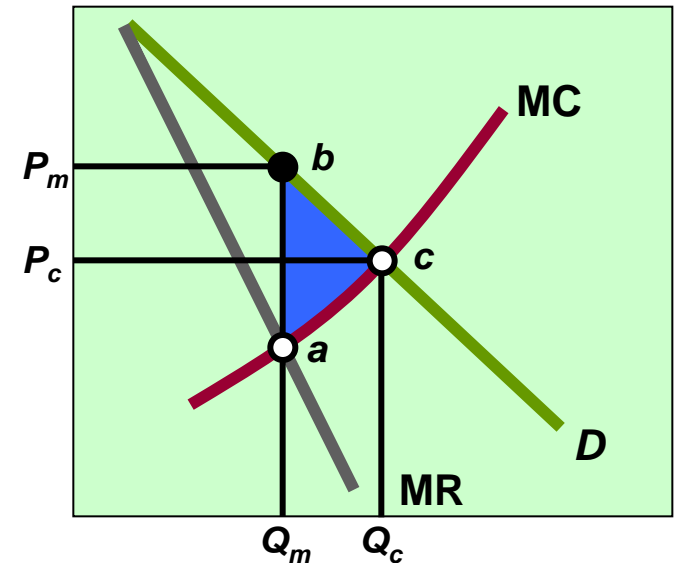


# Economic Effects

Purely  
Competitive  
Market



Pure  
Monopoly



Pure competition is efficient  
Monopoly is inefficient



# Economic Effects

- Pure competition is efficient
  - Productive efficiency
  - Allocative efficiency
  - CS+PS maximized
- Monopoly is inefficient
  - Charge  $P > MC$
  - Deadweight loss
- Income transfer

# Cost Complications

- Economies of scale
  - Simultaneous consumption
  - Network effects
- X-inefficiency
  - Lowest ATC not achieved
- Rent seeking behavior
- Technological advance
  - More likely with monopoly?

# Policy Options

- Use antitrust laws
  - Divide the firm
- Natural monopoly
  - Regulate price
- Ignore
  - Unstable in long run

# Price Discrimination

- Three forms
  - Charge each customer max willingness to pay
  - Charge one price for first unit and a lower price for subsequent units
  - Charge different customers different prices

# Price Discrimination

- Conditions
  - Monopoly power
  - Market segregation
  - No resale
- Examples
  - Airfares
  - Electric utilities
  - Theaters & golf courses

# Regulated Monopoly

- Natural monopolies
- Rate regulation
- Socially optimum price

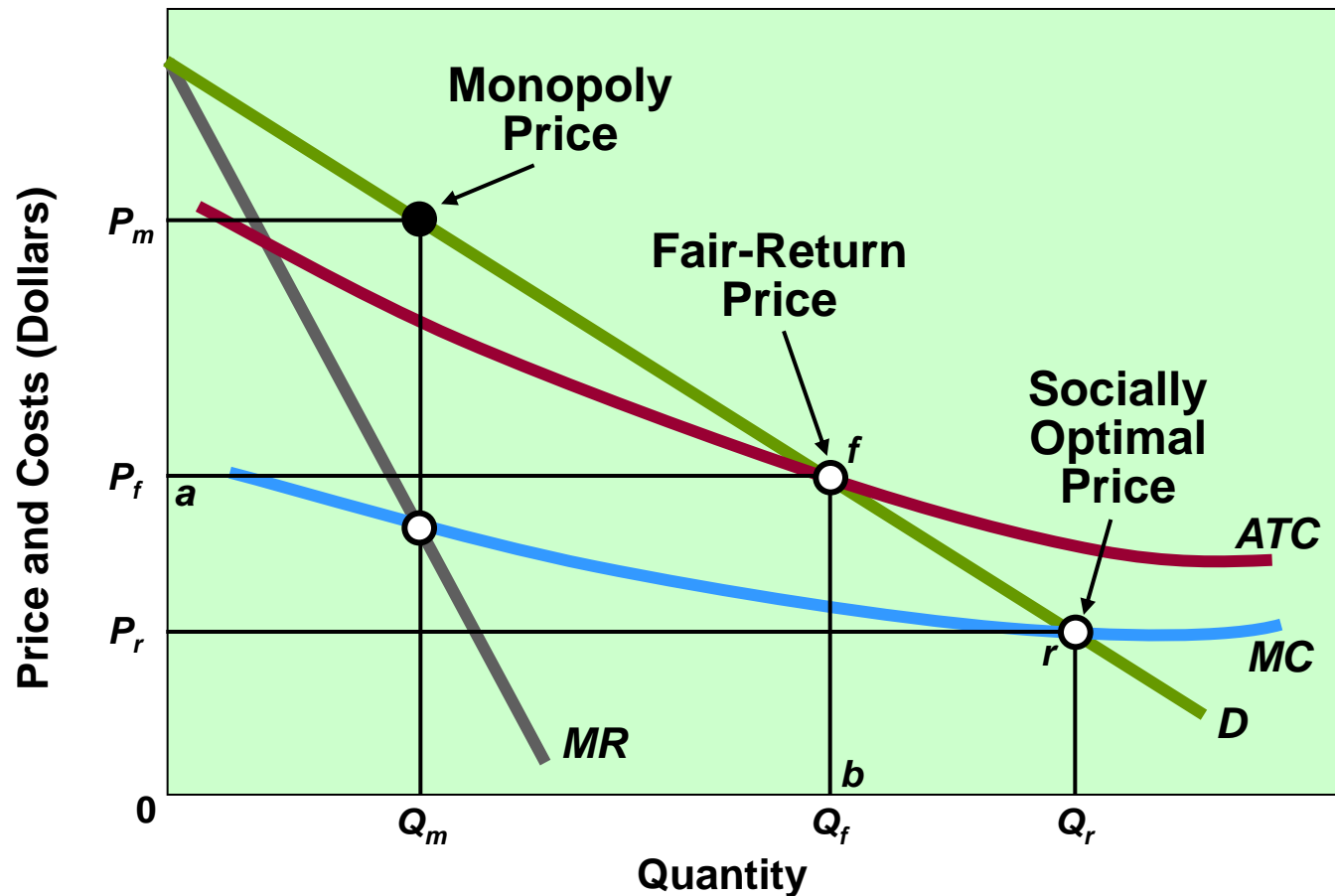
$$P = MC$$

- Fair return price

$$P = ATC$$

# Regulated Monopoly

## Dilemma of Regulation



# De Beers Diamonds

- 66 years of monopoly pricing
  - Independent producers went along
- Mid-2000 abandoned monopoly
  - New discoveries
  - Independent producers withdrew
  - Political considerations
- New strategy
  - “The diamond supplier of choice”



# Key Terms

- pure monopoly
- barriers to entry
- simultaneous consumption
- network effects
- X-inefficiency
- rent-seeking behavior
- price discrimination
- socially optimal price
- fair-return price

# Next Chapter Preview...

## **Monopolistic Competition and Oligopoly**